Electricity on the Farm

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A MONTHLY MAGAZINE FOR THE UP-TO-DATE RURAL FAMILY

10 CASH PRIZES will be awarded for the best titles for the above picture. *(See inside back cover for rules)*

JUNE
1935

Meals That Cook Themselves

THOSE cooking-wise farm women who have joined the countless thousands now enjoying Miracle Cookery find time to get out of doors and do the many things which summer demands around the farm.

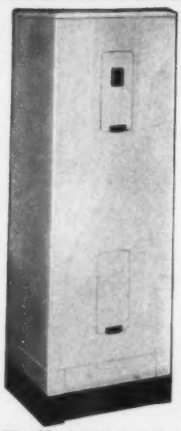
Meals appear on time as if by magic from Hotpoint, the range with a "chef's brain." You merely put the food in the oven (a complete meal), set the automatic timer clock, and go to town or attend to other duties. At the proper time the "chef's brain" turns on the electric current, the food cooks and the heat is turned off, automatically. No guesswork—no danger—no failures.

Full insulation and the concentrated heat of Calrod, Hotpoint's new Hi-Speed cooking coil, keeps heat out of the kitchen. Your kitchen remains as cool as any other room in the house.

Go to your Electric Company today. See the beautiful new Hotpoint Electric Ranges. Learn how inexpensive it is to own one. Edison General Electric Appliance Co., Inc., 5610 W. Taylor St., Chicago.

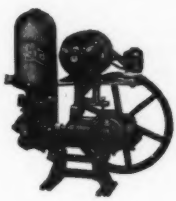
ELECTRIC **Hotpoint** RANGES

AND WATER HEATERS



The **Vogue**—Hotpoint's new, modern style square-type water heater gives hot water every hour of the day or night without one minute's attention from you.

THE FAMOUS TWINE TEST
PROOF OF BALANCED DESIGN



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Goulds CID Cellar Drainer, a recent fast selling addition to the Goulds line, only $35.

THE motor will actually operate a Deep Well Goulds Pump mechanism using a piece of ordinary cotton twine for a pulley belt! That is the famous GOULDS TWINE TEST.

Such performance is the result of the Goulds balanced walking beam and link design, combined with a smoothly working mechanism that will give you years of trouble-free performance. Then too, because no power is wasted in overcoming the friction of poorly fitted parts, your power costs are lower.

That is why your pumping system, whether Deep or Shallow Well, should bear the Goulds trademark. Remember, running water furnished by one of these pumps means increased milk production, better egg yield and quicker fattening of stock—as well as a saving of your time and energy.

SEND THE COUPON NOW.

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CID PUMPS—Fully Automatic

GOULDS

Kelvinator Milk Cooling Equipment will do these 5 things FOR YOU

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2 Produce a higher grade of milk which results in extra premiums. Milk from the finest herd will not bring premium prices unless it is quickly and thoroughly cooled. One New York farmer increased his premium from 25 to 40 cents which meant an extra profit of $27.00 a month.

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4 Kelvinator will create a steadier, more profitable market; help you to secure new customers; assure you year 'round demand for your product.

5 And last, Kelvinator equipment will *pay for itself.* It saves you money on labor costs and on cooling costs. It helps to produce a higher grade of milk which means higher prices. These savings and increased profits will more than pay for the equipment. And after it is paid for, these savings become clear profit.

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KELVINATOR

ELECTRIC REFRIGERATION • AIR CONDITIONING • AUTOMATIC HEATING

Vol. 8, No. 6
June, 1935

Electricity on the Farm

IN THIS ISSUE

Making Irrigation Pay

BY C. J. HURD

A large yearly rainfall does not necessarily mean that there will be a sufficient supply during the summer season. This was the problem faced by an Oregon dairyman, who blazed a new trail by irrigating his pasture land. The installation aroused considerable interest and is a paying one for Mr. Weber. The author outlines Mr. Weber's story on page 6.

Saving Money in Elevating Corn

BY E. W. LEHMANN

Farmers, whose chief crop is corn and who crib their crop by hand labor will be interested in what other farmers are doing to handle their corn crop with less labor; resulting in a saving of time and money. On page 8 the author outlines just how this is being accomplished with the aid of the electric motor.

Brides Will Be Cooks Tomorrow

BY VERA B. MEACHAM

The 1935 bride will want to start her home-making career with a modern range in the kitchen. And, it is the electric range with its numerous advantages such as are outlined by the author on page 10 which makes it the ideal range. But, the brides of today have no monopoly on this up-to-date method of cooking and it is therefore worth investigation by brides of yester-years as well.

Portable Motor for a Dime

BY GEO. W. KABLE

If you have a small motor which you feel should be doing additional work, here is an easy and inexpensive method of making it a portable unit. The author on page 13 tells you how to take that small motor to where the work must be done without resorting to bolting the motor down in each instance.

Regular Monthly Features

Electrical Housekeeping, page 14; On the Air, page 17; Questions and Answers, page 19; What's New, page 21.

EDITORIAL

The devastation wrought by dust storms in the midwest this spring shows very clearly that routine work of man and the varying moods of nature do not always produce the results desired.

Man may prepare the fields for crops, but if nature slips a cog and sends forth winds when rain is expected, disaster may result. The lesson to be learned is that nature cannot be expected to live up to any definite rainfall schedule.

Where certainty of crop production is necessary, where full control by man is essential, then recourse must be had to means, of insuring crops, which are not dependent upon the whims of wind or weather.

Recent trends indicate very clearly that the practice of irrigation is gaining rapidly in this country. A dependable source of water supply and a means of delivering it to the point where needed provide almost the maximum of assurance that good crops will be forthcoming.

Maybe if the dust swept sections of the west had provisions for irrigating all cultivated lands, the dust storms would have been too insignificant to break into headlines of the daily press.

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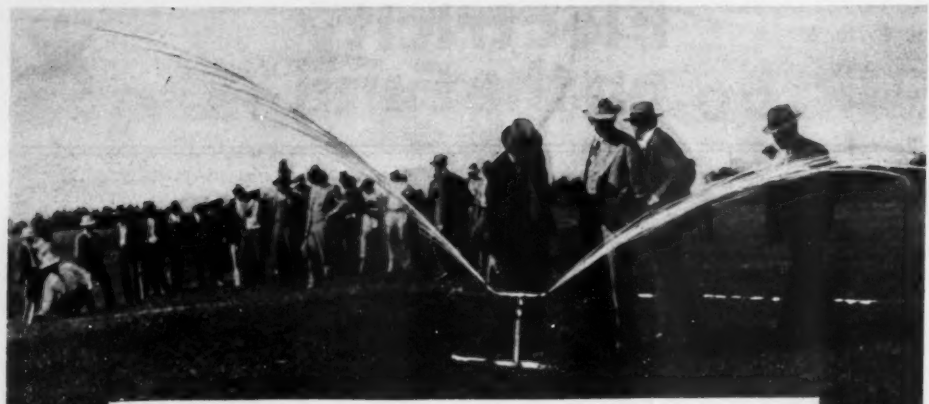


Many farmers in Oregon are interested in this irrigation system.

MAKING IRRIGATION PAY

By C. J. HURD

IT is one thing to have a nice looking irrigation plant, but far better is the knowledge that it is a paying investment. Mr. Alois Weber of Tillamook, Oregon, has the nice looking plant, and also definite production figures that prove that his investment is very profitable. Not only that, but Mr. Weber is irrigating in a district where the annual rainfall exceeds 75 inches. Dairymen in every section of the United States should be interested in Mr. Weber's pumping installation and production methods.

Tillamook County in Oregon, bordering on the Pacific Ocean, is preeminently a dairy and dairy products district. The name of Tillamook cheese is nationally famous and rightly so, because of its high quality and unexcelled flavor. In the last agricultural census, made in 1930, of 621 dairy farms reporting in Tillamook County, the annual income received from 11,334 cows was $1,752,296. The figures show an average annual income of over $2,800 a year per farm with an average of about 18 milk cows per farm. The majority of the farms are owned and operated by the farmer and his family.

Abundant pasture is, of course, the cheapest feed that can be produced, and every farm has many acres devoted for grazing. A very familiar and picturesque scene in Tillamook County is the many dairy herds grazing on the native white clover and other wild grasses.

However, during the summer, these pastures fail, and they must be supplemented by the feeding of root and hay crops. This requires several hours of hard labor every day on the part of the dairyman, and despite all this, the milk production drops.

Irrigation was the logical solution to bring back the grass and clover pastures during the dry season. However, so intrenched were the dairymen in their existing methods of summer feeding that irrigation did not happen to appear logical to them. Also, who ever heard of irrigating in a section where the average rain fall was nearly 7 feet every year?

Mr. Weber, however, didn't care how much it rained in the fall and winter, but what happened during the spring and summer did concern him. With the aid of the county agent, he found that from May until September there was on the average less than 4 inches of rain, and this rain was so well distributed that each shower was of little practical value. "Why not irrigate" asked Mr. Weber. And so, during the summer of 1933, Mr. Weber, with the assistance of the County Agent and the Power Company, installed a modern irrigation plant. The installation was watched with interest by neighboring dairymen, while many shook their heads and said it couldn't be done.

Revolving Sprinkler Method Employed

Although a stream flowed through Mr. Weber's farm, it was not practical, due to uneven ground, to install a flood irrigating system which would have been far cheaper to install and operate. A pressure revolving sprinkler method was used. A 5 H.P. electric motor and a 1½-inch pressure centrifugal pump were set up at the stream. 1770 feet of 3½-inch iron pipe, secured at a reasonable cost as it was second hand boiler tubing, was placed through the center line of a 15 acre field. Every 180 feet along this main line, 2 inch pipe laterals were placed extending at right angles across the field. These laterals extended 140 feet

from each side of the main pipe. Those pipes were laid below frost line and connections between each length were welded in place of using couplings. Hydrants were placed such that with the use of 80 feet of one-inch hose and revolving sprinklers, every foot of the 15-acre field could be irrigated. A triangular system of placing the hydrants was used, which made it possible to irrigate the field with but very little overlapping of water.

Pump and Sprinkler Pressures

The pressure at the pump, with 6 sprinklers operating, is about 42 pounds. The pressure at the sprinklers is about 20 to 30 pounds. The revolving sprinklers Mr. Weber selected were very inexpensive, and each sprinkler irrigates an area 75 to 80 feet in diameter with a flow of approximately 600 gallons an hour.

The total cost of Mr. Weber's installation was $1,050.00, including pump, motor, pipe, 6 lengths of 80 feet of one inch rubber hose, sprinklers, and the cost of having the pipe connections welded. In other words, with the labor of himself charged at no cost, his total investment was $1,050.00.

The installation was completed in late summer of 1933, but even then Mr. Weber could note a material gain in green feed. That fall he planted 8 acres of ladino clover, which is especially adapted for irrigation.

The operation of the irrigation system was very easy for Mr. Weber. Each sprinkler was left in place 12 hours. In this time approximately 3 inches of water was distributed on the clover by the sprinklers. With the six sprinklers, an area equivalent to approximately ¾ of an acre was irrigated each 12 hours. If Mr. Weber desired, the pump could easily handle 8 or 9 sprinklers which would irrigate an acre of ground each 12 hours. Since the electric pump is perfectly dependable, Mr. Weber operates it 24 hours a day, so that each day 1½ acres of pasture are irrigated. He can easily irrigate the entire 15 acre pasture in 10 to 12 days. During the summer the pasture is gone over 6 to 8 times, depending, of course, on the length of the dry season.

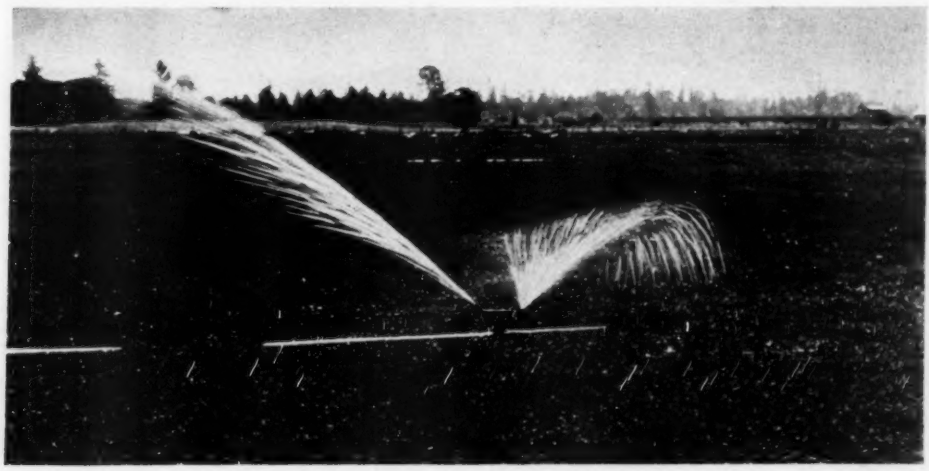
It is a one man job to change the sprinklers, requiring only about 30 minutes to change the six sprinklers. That is all the labor necessary, and it fits in very well with the labor program on the dairy farm.

The results due to irrigation were outstanding. Mr. Weber found that the 15 acres of irrigated pasture provided ample feed from May until October for 45 cows. This is the period that normally barn feeding of roots and hay are necessary. However, since only 15 acres were required for feed production, the balance of Mr. Weber's 70 acre farm could be devoted to production of hay crops for the winter season. Mr. Weber, for the first time, found it possible to produce all of the hay used for the entire year on his own farm. In previous years, so many more acres had to be used for pasture that it was not possible to grow a sufficient quantity of hay to last during the winter.

Butterfat Production Increased

In addition to a substantial reduction in feeding cost, a decided increase was shown in butterfat production. Mr. Weber's cream checks showed an additional 1349 pounds of butterfat over the previous year, netting him $407.70 more income. His irrigation cost amounted to only 85 cents per acre per month or a total electricity cost of $63.75 for the season, leaving him a net profit due to increase in production alone of $343.95. The profit due to increased production will soon pay for this irrigation installation. Is Mr. Weber satisfied? He certainly is! He is now planning an additional 5 acres of irrigated ladino clover, which incidentally his present pump and motor will be capable of handling.

Mr. Weber's neighbors are now more than interested. At a field day held in September by the county agent, more than 40 interested dairymen attended, and without much doubt several will next year follow Mr. Weber's example and use electric pumping to make extra profits.



This sprinkler, operating at a pressure of 25 pounds, will cover a 75-foot diameter area with 3 inches of water in 12 hours.

SAVING MONEY IN ELEVATING CORN

The corn crop can be housed in less time and with reduced labor by employing the portable electric motor — the farmers' willing chore man.

By E. W. LEHMANN

ALTHOUGH elevating corn is a seasonal task, it is one important job that helps to make the use of a portable motor justified on many farms where corn is one of the chief crops. Scooping corn from the wagon into the crib is no easy task; and the use of the electric motor is not only a time saver but makes the job easier and reduces the cost. On one Champaign County, Illinois, farm, operated by the Polk brothers, 3241 bushels of ear corn were elevated 24 feet into a crib with a total electric consumption of 21¼ kilowatt hours.

The elevator on the Polk farm was in good mechanical condition when tested and operated more efficiently and required less power than most outside corn elevators. In a study of seven such elevators by the Agricultural Engineering Department of the University of Illinois it was found that the power requirements ranged from slightly over ¼ kilowatt hour on the Polk farm to slightly more than ½ kilowatt hour to elevate 1000 bushels one foot.

The most common type of elevator in use in the corn producing area is the outside portable type, such as the one on the Polk farm. It is arranged so that the front end of the wagon can be raised and the corn dumped into the elevator hopper. With such an elevator, a 35-bushel load of corn can be elevated into a crib 25 feet high in less than five minutes when driven by a 5 H. P. motor. The power requirements for this

Corn picking time on the F. W. Jordan farm near Champaign, Ill., finds the 5 H.P. portable motor providing the driving energy for an outside drag elevator.

task make the cost of operating the motor almost negligible.

Where a farmer has the outside type of elevator driven by a gas engine or equipped to be operated by horses it can be changed to be driven by an electric motor by means of a special speed jack. The operating efficiency of many such farm elevators can be improved by making adjustments and repairs and by proper lubrication. The average amount of electricity used by the seven elevators studied was slightly more than .4 of a kilowatt hour to elevate 1000 bushels one foot. To elevate 1,000 bushels twenty feet on the average would require 8 kilowatt hours.

F. W. Jordan, another Champaign County farmer, has an outside drag elevator which had been used a number of years before it was changed over to electric drive and operated with a 5 H. P. portable motor. The height of this elevator is 25½ feet, the total length is 40 feet and it is provided with a 24-foot chain conveyor at the top of the crib. The latter makes it possible to distribute the corn throughout the length of the crib without moving the elevator. 26 kilowatt hours were used in elevating 2886 bushels of corn with this elevator. The time required in actual operation was 7½ hours. The big advantage of such equipment is its ease of operation, the control, and the short time required for unloading at the crib. More time was required in unloading and elevating in many instances than necessary due to the fact that seed corn was selected as the load of corn was being elevated into the crib.

In most cases, the inside vertical elevator is more efficient in operation than the outside elevator. It is protected from the weather and should be in better operating condition. In the Illinois study one inside elevator was tested and it required only .13 kilowatt hours to elevate 1000 bushels one foot which was just one-third the average amount required by the seven outside elevators tested. It should be remembered that the power required is only a small part of the total cost —the principal item being the investment cost. It is for this reason that most corn growers have purchased the cheaper outside type.

Ordinarily a farmer is not justified in having a stationary electric motor to be used for operating only the elevator. By having a portable motor, the elevator can be driven during the harvest season and the motor is available for other uses during the rest of the year.

In the Illinois study of electric motor driven elevators, a 3 H. P. motor was substituted for one of the 5 H. P. portable motors and it was found that it had ample power to operate the elevator. The proper size motor would necessarily be selected on the basis of the height and capacity of the elevator. Other uses might also determine the size of portable motor selected. Most farmers like to have at least a 5 H. P. motor for grinding and it is about the smallest size suitable for operating a small ensilage cutter.

A few years ago in a conference on the use of electricity on farms, Mr. Ralf Arbogast, a Michigan farmer, had this to say regarding elevating grain on his farm: "Before I installed an elevator and motor in my granary, it required the help of four good men, working at top speed, to handle and bin the grain threshed on our farm in a season, a rate of $3.50 a day—$14.00 per day for four days—$56 besides board, which will make a total of $75.00 per season.

"After installing an electric motor and elevator at a cost of approximately $100, the cost for labor, electricity, depreciation and interest on the investment was $14 per season. A boy watched the elevator and the electric motor do the work of four men. The saving on this item alone amounted to $61.00 per season." With cheaper labor available, as at present, the saving would not be so great.

In commenting further in regard to the use of his motor, Mr. Arbogast stated that it was used as a portable motor for seed cleaning and for shelling and grading corn.

Portable 5 H. P. motor and elevator on the T. Polk farm southwest of Champaign, Ill., ready to go into action.

BRIDES WILL BE COOKS TOMORROW

By VERA B. MEACHAM

Above: Modern brides cook by measurement—of both ingredients and heat. Left: Cooking with electricity 's simple and reliable.

WHEN the bride brings her honeymoon back to the new house she is going to make a home, she turns into a cook overnight. Since cooks can't work at cooking without a stove in the kitchen, buying a range is an important part of setting up housekeeping.

There are many reasons why the 1935 bride might like to heat that range with electricity. Being a modern young person herself, she naturally looks with favor on using a modern fuel, in fact, the very latest one developed for cooking. But the mere fact that it was new would not carry so much weight with this shrewd young person if it did not offer her more than any other fuel she knows.

When she cooks with electricity she has no fire in the kitchen stove, just clean, safe, quick heat, automatically controlled for cooking needs. Heat in a round burner on top of the stove, heat in a deep insulated well, heat in a sizeable, thick walled oven. She can count on this heat always being there when she needs it, always the same amount when the switch is turned to high in one of the burners, always the same amount when it is turned to low. It can't change; it can't blow out. She can set a pointer on a dial for the heat which she wants in the oven, turn a switch, and the thermostat will keep the temperature of the oven at that point without any attention from the cook so she can bake at a constant even heat.

Oven Regulation Eliminates Guesswork

She likes this fire because it lets her use the modern recipes she finds in magazines, in advertising booklets, and in the fat new cook book she bought herself. These new recipes all say "bake so long at such and such a temperature." The electric range leaves her nothing to guess at about oven temperatures; it just gives her the one she wants.

She has discovered while she has been looking into this business of being her own cook, that modern methods of cooking vegetables are easily followed on an electric stove with its different

Above: "Any bride likes to cook with electricity because it is so clean."
Right: For the little, new house.

burners of exactly measured heat. She sees quite plainly that modern methods of cooking meat for savory roasts with little shrinkage will go on very well in a flameless, tight, heat controlled oven.

She discovers as she shops about for ranges, that the electric range doesn't merely look modern; it is modern. This is more than a matter of straight sides, cabinet drawers and enameled surfaces. It is the heat, safe, clean, exactly controlled that makes an electric range the really new way of doing one of the oldest and steadiest jobs in the world.

Another Important Reason

That touches on another reason why she would like to begin housekeeping with an electric range.

Because it is so clean.

Of course she knows without anyone telling her that a stove that needs no fuel carried in and has no ashes to carry out isn't going to dirty up her kitchen floor. More than that, it won't smoke when she builds a fire, or when the wind is wrong. And you may be pretty sure that now she is mistress of a house herself, she is thinking twice about keeping her kitchen walls clean, about keeping the woodwork fresh—about how often she will need to wash her crisp new curtains.

She isn't ignoring the fact that the range itself will be easy to clean. Its smooth porcelain enamel surfaces can be washed off with soap and water. Food spilled on the burners chars quickly and can be brushed lightly away. Discolorations on the closed burners can be scoured with a gentle abrasive. The racks and guides and the heating elements all come out of the oven leaving a bare walled box to wash.

There will be no soot or grime to scour off the bottom of pans when she uses the cleanest heat in the world for stoves.

It is more than possible, since she didn't stop being a bride when she turned into a cook, that she is even thinking that it will be easier to keep the bride clean, too, with a stove like this. No soot or grime to roughen her hands, to darken her finger nails, to smudge her clothes. Brides being what they are it is quite likely that she is planning to keep herself always as fresh as a daisy no matter what she has to do.

Hohum! No wonder everybody loves a lover—and his bride. They are nice—aren't they?

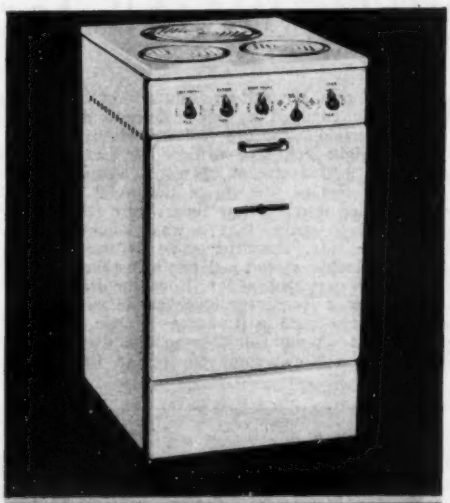
That suggests another reason why any bride—you, if you want to "stay as sweet as you are"—finds it pleasant to cook with electricity.

It does not heat up the kitchen. The heat from the burners is pretty well absorbed by the contents of the pan on top of the burner if the pan covers it well. The heat in the oven is shut in with a couple of inches of insulation inside the walls. It is effectively engaged in cooking the food with very little wasted out in the room. Naturally a bride thinks this important in a stove she is going to use three times a day, winter and summer for goodness knows how long. It is important for her comfort, for her good looks, for her good nature—so maybe, just a little for the happiness of the new family.

It may not be tactful to mention it, but there are other grounds for thinking electric cooking wise for brides.

It is simple and reliable.

If a girl can read, if she wants to learn to cook



well, nothing on earth can stop her, not inexperience, not day dreaming, not forgetfulness, not lack of good judgment can entirely defeat her if she has a good stove.

Modern recipes lay great stress on measurements, measurement of the ingredients, length of heating; measurement of heat, and length of cooking.

With the right cups and spoons, she can measure exactly the stuff that goes into her cakes. With an electric range and a clock on the wall, she can measure exactly the heat her cakes go into, and how long they stay there.

It is so simple that even a bride can do it. You can see that it makes no difference whether she has been cooking for years or has just stepped from a schoolroom into her own kitchen.

There is still another motive for considering an electric range for a bride's kitchen. It is an economical fuel if she will learn to put it to good use. Of course she can waste it, as she can waste butter and eggs, spices and sugar. But with the past six years nagging at their heels, I don't believe many brides we know will be wasteful. They want to make a dollar stretch as far as it will. So I think we can assume that the bride who turns cook will be a thrifty one.

She will appreciate a fuel she can turn on as she does her light, just when she needs it. She will appreciate a range that is built so the burners will hold the heat and do a lot of her cooking with the current turned off entirely. She will appreciate a thermostatically controlled oven where the current is on just long enough to give the temperature she wants then snapped off on the dot.

Making the best use of the current is an economy she can see at once. A cleaner kitchen, better food, a greater saving of food values, as well as successful baking, these economies are there, too, and show in the long run.

No fires to build, no fires to tend, less cleaning to do, all these mean more time off for the cook, too. A shorter working day is an important gift to the brides who will be cooks tomorrow.

WELL WATER for BLACKBERRIES

A YEAR ago Mr. Albert Bouffleur of Salem, Oregon, engaged a well driller to drill a well for domestic use and irrigation. The well is an eight-inch hole drilled 170 feet deep. They struck a live stream of water which rose to within 40 feet of the top of the well. After they had bailed it out a few times, they felt that the flow was so strong that it was sufficient for irrigation and Mr. Bouffleur made arrangements to have an electric motor and pump installed.

During the past season Mr. Bouffleur irrigated his nine acres of Evergreen blackberries with this equipment. He used a 15-horse electric motor hooked on to an eight-inch two-stage deep well pump. This is down some 80 feet in the well and with the motor using 13-horse power, delivers 375 gallons of water per minute.

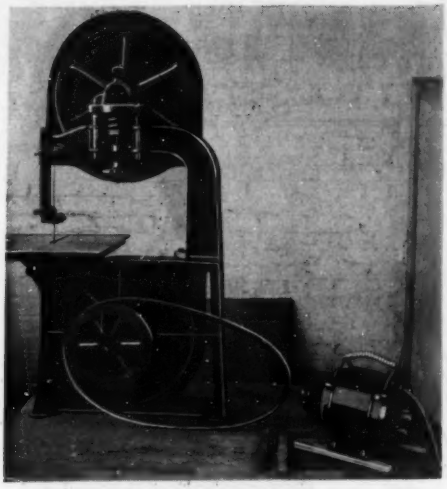
Mr. Bouffleur conducts the irrigation water about his berry field by means of underground pipe and it is distributed from stand pipes properly spaced and carried down ditches along each side of the rows. He figures that he applies eight acre-inches of water at a pumping cost of ten dollars per acre.

Mr. Bouffleur states, "I will get my real returns this year and the following years from the increased cane growth and consequent heavier tonnage of berries. It is surely convenient to come up to this post and just push the button and the pump starts."

Albert Bouffleur of Polk County, Oregon, tells his neighbors and visitors about his success with his electric motor and deep well pump in securing water for irrigating his Evergreen blackberries.

PORTABLE MOTOR for a Dime

By GEO. W. KABLE



Improvised portable motor ready to use on a bandsaw. Note the guide strips which hold the motor in place.

THERE are many jobs about the farm which can be done with a small motor of ¼ or ½ horsepower. These include operation of tool grinders, saws, battery charger, concrete mixer, corn sheller, drill press, fanning mill, feed grinder, fruit grader, sausage grinder, ice cream freezer, churn, washing machine, and the like. Some of these are done frequently enough to warrant having a motor fastened permanently in place. Others call for power less frequently, but can be done with much greater satisfaction if a small power unit can be carried to the point of use and easily attached to the machine.

A small motor can be made portable at a cost of not more than a dime. All that is needed are four one-quarter inch bolts, some scraps of wire, and a few sticks. The base and handle which result have proved very satisfactory in our rural electric shop at the University of Maryland.

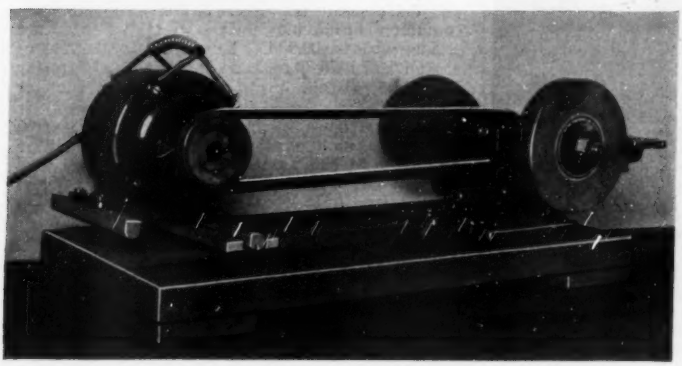
The handle is made from two pieces of wire fastened around opposite ends of the bolts which hold the motor frame together. These bolts are loosened, the wire placed behind them, and the bolts are then tightened to hold the wire in place. No. 10 insulated wire with a piece of metal BX tubing makes a very satisfactory handle. If bare wire is used, the handle may be wrapped at the top with friction tape.

The motor base is made from two strips of wood about an inch square, rounded at the bottom, and attached to the motor legs with small bolts. These strips should be made long enough to extend at least an inch beyond the outside of the pulley, since the line of pull on the motor falls under the pulley.

Wherever the motor is to be used, two strips of wood one-half inch thick are nailed down at a distance from the machine which will cause the motor to tip up when the belt is put in place on the pulleys. This tipping or hinging on the front leg of the motor base enables the motor to act as its own belt tightener. The two strips of wood are placed just far enough apart so the front base piece will fit in between. The motor is held in position laterally so the belt will run true by a small nail driven at the pulley end of the base rail.

Where the weight of the motor is used to keep

(*Continued on page* 20)



Kable's portable motor base in use with a farm tool grinder. The motor pivots on the front leg of the base and serves as its own belt tightener.

ELECTRICAL HOUSEKEEPING

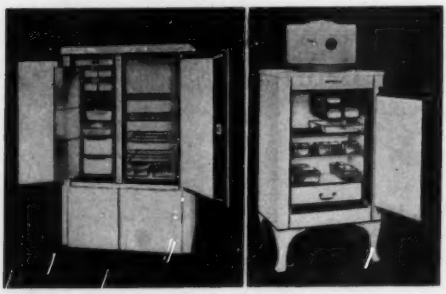
Conducted by
GAIL MEREDITH

A handy tray on the door.

If You are Looking for REFRIGERATORS

IF you are shopping for an electric refrigerator this summer, you will be pleased, I am sure, with the beauty of the new models. Their smooth corners, straight lines, and gleaming white surfaces are styled for modern kitchens. Easy to look at and easy to clean.

The manufacturers say that improvements in the mechanism that makes the cold have cut down the cost of operation, too. Besides, most boxes provide a control that permits you to change the temperature for swift freezing of ice cubes and desserts, then set it back again for your ordinary needs. Or if you are to be gone for a time and the box is to remain closed, to set it back still farther to what they call "vacation operation."



Left: The porcelain containers for fruit and vegetables fit into their own space.
Right: A roomy vegetable drawer, and sliding adjustable shelves in this cabinet. The upper right hand tray is rubber.

These features make them easy on the pocket book.

Nowadays a good refrigerator runs so quietly that you have to cock an attentive ear toward it to be sure that it is going.

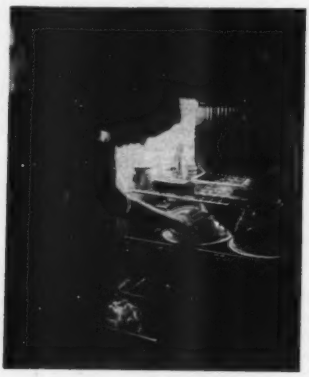
Having achieved reliable and economical operation for the refrigerator, many manufacturers have turned their attention to added convenience in the box itself.

To begin with, you can open the door with both hands full. All you need to do is press a pedal with your foot or push against the handle with your elbow or arm and the door swings open.

Then there is the light inside the cabinet. It turns on when you open the door and off when you shut it again. This light is a real help in keeping everything in the box in plain sight. You needn't hunt and peer about; you can't forget about some left overs entirely, not when they stare you in the face whenever the door is opened.

The cabinets themselves are designed to meet the demands of the most exacting housekeeper who wants a place for everything—and hopes her family will put it there. The provision of a definite storage space for definite foods assures their proper placement in the refrigerator as well as simplifying good housekeeping.

Some refrigerators have a separate closed compartment called a cold chest that is kept always below freezing to take care of an extra supply of ice cubes, of frozen meats, of fish or game. In others there is a sliding drawer for vegetables



The light turns on when you open the door.

and fruits. or a row of drawers, one porcelain l'ned, others with wire sides to take care of fruit and dairy products. There are covered porcelain containers fitting into their own space; there are sliding wire baskets that hang from the bottom of a shelf and hold butter and eggs or small jars for leftovers. Storing them this way saves valuable shelf space.

Other refrigerators increase their storage areas by shelves on the door. These shelves, with a guard across the front, are wide enough to hold eggs, butter, fruit and jars or bottles. Six shelves on the face of a door mean considerable storage space.

In one refrigerator shelves are built on a separate inner door that closes off the main cabinet. It is designed to hold the foods most frequently needed so the other storage chamber is not exposed to room temperature every time the door is opened.

Even the shelves have learned to adapt themselves to varying needs. Some of them are hinged

in the middle so you can turn one half up to make room for tall containers. Some of them tilt up against the wall. Some of them are adjustable so you can change the distance between them to fit your dishes. Some of them slide out, bringing the dishes on the back of the shelf into easy reach. These sliding shelves are so designed that they do not sag down, but stand rigidly level when pulled out.

Still another refrigerator has a shelf that revolves to bring the food at the back within easy reach of your hand. It is shaped like a half circle and mounted on a bracket at the back of the cabinet. It will swing easily in either direction at a slight pressure, yet it locks securely in place

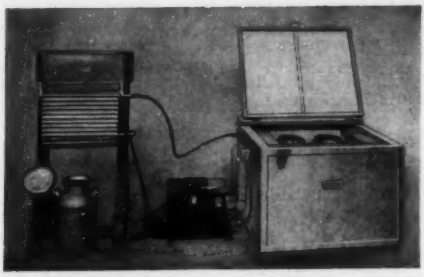
Storage area increased by providing shelves on the door.

and it cannot tip and start an avalanche of food to the floor. It is a fenced in shelf, a guard rail keeps the dishes from sliding when you turn it around. Besides making every dish easy to reach, because this half round shelf does not fit into the corners, it leaves a place for tall bottles on the back corners of the shelf below.

In some of the refrigerators there is a tray that fits on the bottom of the cabinet, or hangs on the inside of the door. The tray in the picture stands flat against the door when not in use, but drops down into place easily. It can be lifted off the rack and used to carry several articles at one trip when you are preparing a meal, or to

This shelf revolves, bringing all the food within easy reach. The corners of the shelf below are convenient for bottles.

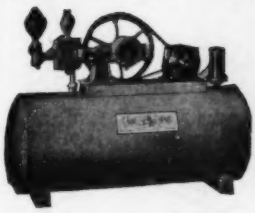
MILK COOLERS



ELECTRIC REFRIGERATED FOR DRY OR WET STORAGE

Get premium prices for your milk. Do not run the risk of having it rejected. Uniflow Lectrik-Ice milk coolers immediately reduce milk to 37° or desired temperature and hold down bacteria count. They are electric refrigerated and provide a quick and positive means of cooling through a proper aerator. Milk is maintained at desired low temperature until ready for delivery, in dry storage compartment. Made for dry or wet storage. Complete cooler, made in its entirety by us—one responsibility. We also make a dry cooler for bottle storage. Write today for free bulletin telling about Uniflow Milk Coolers.

WATER SYSTEMS



as low as

$43.75

Uniflow water systems offer users ten advantages of construction which make them unusually practical for everyday use. Made for both deep and shallow wells and many sizes for all requirements. Do you know that you can buy a complete shallow well system for as little as $43.75? Write today for information giving depth of well and number of gallons you require daily.

GUARANTEED

UNIFLOW

"THE PUMP SUPREME"

UNIFLOW MANUFACTURING CO.

DEPT. E, ERIE, PA.

Water Systems—Water Softeners—Water Filters
Beverage Coolers—Electric Refrigeration—Cellar Drainers

take the salads or the dessert right from the refrigerator to the table. It saves a good many steps.

Each year somebody invents something new for handling ice cubes. Besides the rubber partitions that fit into the metal trays, there are all rubber trays and flexible metal trays that let you push out one or two cubes at a time without disturbing the others. In one line of refrigerators there are special levers on the trays themselves. You have only to push them up and then outward and the cubes come tumbling out ready for use. Easy, isn't it?

An electric refrigerator makes a big difference in taking care of food, a big difference in menus, and a bigger difference in meal mileage. So it pays to look them over carefully to select just the one that is best for you. A good mechanism, a substantial box, all the conveniences you want.

I have never really believed her, but a friend of mine who has had an electric refrigerator a good many years maintains that she could keep house without her husband, but not without an electric refrigerator.

I suppose she is exaggerating, but that's what she says.

Electric Servants

You may brag about your washer,
Praise your expert ironer, too,
Talk about electric ranges
And the work that they will do.
Your refrigerating servant
You may think the best in town,
Motor servants bring you water,
Neatly stitch your newest gown.

You may have a speedy servant
That can mix and grind and churn,
A perky one may make you coffee,
Bake your waffles to a turn.
Electric maids may wash your dishes,
Sweep and polish, clean and brush,
Tackle any job that's waiting,
Do it well and in a rush.

But there's a trusty little servant
Whose quick help I always seek
When the kitchen things need mending
Or wash boiler springs a leak.
Since I've tried this little servant,
Would I be without it? Never!
Mending's fun with such a helper;
Electric Soldering Irons are clever.

By Mrs. H. G. Butler
Waterport, N. Y.

• • •

CLEANING the CLEANER

TAKING care of the vacuum cleaner is such a simple matter that there is grave danger that we may forget to do it at all.

If your vacuum cleaner has a nozzle that is wholly or partially supported, it lifts the carpet off the floor as it cleans. Because the carpets and rugs in different rooms in your house have pile of different heights, the manufacturer could not adjust that nozzle to be right for all of them. Not with any one adjustment. So he made it adjustable to let you raise or lower it to fit your own rugs.

If you leave it too high, it will not pick up the carpet. If you set it too low, it will be hard to run the cleaner. Moreover, with the motor driven brush or agitator cleaners, you will lose most of the cleaning action due to beating. And besides that, you greatly increase the energy required to run the cleaner.

About an eighth of an inch above the carpet is the adjustment recommended for these machines. For a straight air cleaner, one-sixteenth of an inch.

Watch the brushes and regulate their height as they wear down. Have them renewed when they need it, if you would get the best service from your machine.

It might seem quite unnecessary to suggest that you do not make your vacuum cleaner pick up hair pins, nails, or pennies if you would keep it in good condition. But folks do. Just a week or so ago, I saw a man pry a three inch nail from the fan housing of a fine cleaner. Of course it nicked the edges of that fan. And the fine adjustment of the fan is important for efficient operation.

Keep the motor clean and oiled according to directions.

The bag is the seat of most vacuum cleaner troubles. Yet its care is most simple. Just keep it clean. The effective suction of the cleaner is cut down when the air cannot get through the bag, and if the bag is packed, and crammed, and crowded with dirt, the air has a hard time getting through. Empty it often. That is all the care it needs. Just keep it clean.

If you didn't throw away the slip or booklet that came with your cleaner, look it up. These booklets give you careful directions for using and caring for the machine,—for keeping it always ready to work, as the English say "at the twitch of a switch."

I hope you can find it.

ON THE AIR

Conducted by JEROME J. HENRY

A Singing Lesson

LEARNING to sing is no mild business if you learned like Lawrence Tibbett did.

"One of my teachers," he explained, "believed in strong arm methods. He'd yell to loosen up

Gladys Swarthout, famous young American contralto, is heard frequently on the radio.

while I was singing and give me a terriffic clout on the back. Then he would grab my jaw and shake it from side to side if I happened to miss a note. Some times while I was singing he would make me lie face down on the floor, roll over, get up, climb on a chair and jump down. This was supposed to make me relax."

• • •

2,000th Farm and Home Hour a Gala Affair

AGRICULTURAL radio leaders recently presented the 2,000th National Farm and Home Hour. It was a gay affair which brought back brief glimpses of the early features of the program. Many of the old favorite entertainers who have been heard in the program presented each week day since 1928 returned to the microphone to again contribute to the program.

The Farm and Home Hour was designed as a service to the farmer in 1928 by Frank E. Mullen, NBC director of agriculture. Since that time it has been used as the voice of the Department of Agriculture, leading farm organizations, and many agricultural authorities, and as a vehicle for sending the finest available entertainers to the homes of farm folk.

Prominent individuals spoke briefly in the 2,000th program. Among them were Secretary of Agriculture Henry A. Wallace who said, "That this program has endured longer than any other sustaining broadcast feature seems a natural result of certain circumstances. On the one hand are the broadcasters. The public has entrusted to them the use of one of our greatest natural resources—the broadcasting frequencies allotted to this Nation by agreement among the Nations of the world. They obviously have an obligation to serve the public including farmers and homemakers—in exchange for their tenure of the air waves.

"On the other hand is the Department of Agriculture charged in the act creating it with the duty of acquiring and disseminating useful information. *** The result has been much radio broadcasting by the Department over facilities made available by broadcasters."

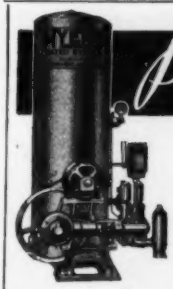
Secretary Wallace stated that "In our broadcasting as in other reporting to the public we want to set forth all the facts. Then we hope to see, as the larger issues come up for decision, widespread public discussion of those facts, and finally, a conscious, deliberate choice of courses of national action that will be just to all groups and advantageous to as many as possible."

Such is the purpose of radio programs for the interest of farmers. Their more serious side is worthy of attention even in the summer months when the press of farm work reduces the time available for radio listening. And the entertainment is indeed worthwhile for busy rural people whose happiness is increased by radio.

• • •

Culinary Stuff Is Old to Gene Arnold

THE deference and respect in which Gene Arnold, interlocutor in the Minstrels broadcast heard each week over an extensive network, is held by head waiters wherever he dines has its roots, surprisingly enough, not so much in his genial friendliness as in his reputation as a connoisseur of foods. Gene's ability to order a dinner exactly right is the result of his childhood



Play Safe

Water systems are one of the first improvements for which money may be borrowed from the Government under the Federal Housing Act. See your Myers dealer for information.

YOU know that some day you are going to have running water. You know that right now even the Government is willing to help you secure this greatest of all conveniences. You know that MYERS Water Systems are absolutely reliable; that they have a wonderful reputation for durability and economy and that, at present low prices, they offer values which you may not be able to duplicate again for many years. Play safe; act on what you know. Send today for our water system booklet and name of the nearest MYERS dealer.

THE F. E. MYERS & BRO. CO.
1145 Orange Street, Ashland, Ohio
"Pump Builders Since 1870"

RUNNING WATER
YOUR FAMILY DESERVES IT

MYERS WATER SYSTEM

experiences at home. He was the second of five children, and it usually fell to him to prepare the meals for the family at Newton, Illinois, during his mother's absence or illness.

He took to his culinary assignments with an enthusiasm and believes that if he hadn't become an actor and singer, he would probably have become a chef.

His impressive reputation as a diner out filled Eleanor Howe, NBC cooking expert, with considerable trepidation recently when she called on him to name his favorite dish so she could prepare it during a radio broadcast at which Gene was the guest. It was spaghetti.

• • •

Immortal Dramas of Bible on the Air

PERHAPS you've been fortunate enough to happen to tune in recently on an entirely new type of radio program which uses stories from the Old Testament as a basis for excellent dramatizations.

The series of dramas on Sunday afternoons over NBS stations has included the stories of Samson and Delilah, the Flood and Noah's Ark, and a number of others.

Works of great composers are used for the musical background. No commercial announcements are made during the dramatizations, another rather unusual characteristic of the broadcast. To heighten the effect of the famous Bible stories which have been carried generation to generation for thousands of years, choral music and orchestral numbers are blended into the broadcasts.

• • •

Frances Langford, Soprano, Changes to Contralto

A PLAIN, ordinary tonsil operation explains Frances Langford's beautiful contralto voice. She started singing on her college campus in a clear high soprano. One semester an inflamed throat sent her to the hospital where her ailing tonsils were summarily removed.

For several weeks thereafter the young student didn't use her voice, but one night at a party friends asked her to sing. Frances was more astonished than anyone else when, instead of her familiar soprano, there emerged deep, velvety tones. Her acquaintances were enthusiastic and urged her to seek a radio engagement.

Between classes the young songstress motored to Tampa, Florida, where she was heard on a radio program. Rudy Vallee, who happened to be visiting the Florida resort, heard her during one of the programs. He became enthusiastic about her singing and quickly made arrangements for Frances to appear as guest star on his program over NBC stations on the following week. As a result of this appearance she received several offers to appear in radio programs and on the stage.

At the present time she is featured in "Hollywood Hotel," a popular CBS program. Miss Langford's fan mail bids fair to nominate her as America's College Queen. Letters come from cadets at West Point, midshipmen at Annapolis, and fraternity boys from Illinois and many other colleges.

Miss Langford was born in Lakeland, Florida, 22 years ago; she weighs only 100 pounds and makes every effort to gain weight. She reads continually; her apartment is continually strewn with magazines and books on many subjects. She has a pet alligator which reminds her of home, and a lazy cat that stretches and yawns at the arrival of each visitor.

Lowell Thomas, another favorite of farm families. The globe exemplifies Lowell's extensive experience from which he grasps a wealth of interesting material for his listeners.

The Proper Instrument

"What would you do, Goofus, if you were running a circus and the monkeys got out of their cages?"

"I'd get a monkey wrench and tighten them up."

College Student (to Professor): Is there a word in the English language that contains all the vowels?

Professor: Unquestionably.

College Student: What is it?

Professor: I've just told you.

Nuts Are Nuts

"Daddy, are flies flies because they fly?"

"I suppose so."

"Are fleas fleas because they flee?"

"Sure, what of it?"

"Well, I told teacher that bees are bees because they be."

Office

A delinquent customer out in Arkansas claimed that a shipment had arrived in poor condition, and refused to pay the bill, although it was several months overdue.

The credit department, after having written several letters, without eliciting any reply, finally wrote four letters as follows:

1. To the railroad agent at the town in question requesting information as to the shipment.
2. To the president of the local bank concerning the financial condition of the customer.
3. To the mayor of the city, asking him to recommend a good lawyer to handle the case.
4. To the merchant himself, threatening suit, unless he paid up at once.

To all of which, the following reply was received:

"Dear Sirs:

"I received your letter telling me that I had better pay up. For your information, I would state that I am the railroad agent here, and received your letter about the shipment; I am also the president of the bank, and can assure you of my financial standing.

"As mayor of this city, I cannot recommend any other lawyers than myself, as I am the only member of the bar in this vicinity.

"And finally, if I were not the pastor of the only church in town, I would tell you to go to hell and sue.

"L. O. Doe."

Questions and Answers

Conducted by H. J. GALLAGHER

Cost of Pumping

Question: I have a dairy farm and require water for about 60 head of cattle. On the advice of a local dealer I installed a shallow well pump and have been having trouble ever since.

My electric bill for the pump alone has been over $20 a month. I have other electrical appliances that I cannot afford to use on account of the high cost of pumping. I would like to use an electric motor for grinding but am afraid the cost of operation would be too high.

I would appreciate information on what you mean by "cheaper electricity on the farm" as emphasized on the cover of your magazine in February.

MRS. W. G. STONE,
Lee Hall, Va.

Answer: There are three things or a combination of three things that may be wrong with the water system.

1. The pump may be defective.
2. The wrong type of pump has been installed.
3. A "short" may exist in the distribution system that causes an excessive loss of electricity.

The amount of water normally required for house use and 60 head of cattle would be about 20,000 gallons a month. The amount of electric energy required to pump 20,000 gallons of water should not exceed 40 k.w.h. At 10 cents per k.w.h. the cost would be only $4.00.

A shallow well pump with a capacity of 450 gallons per hour equipped with a 1/3 h.p. motor using 400 watts per hour would operate about 45 hours per month or 1½ hours a day to pump 20,000 gallons.

To "pump" a $20.00 electric bill at 10 cents per k.w.h. the pump would have to operate 500 hours per month or 17 hours a day and at rated capacity would deliver 225,000 gallons of water. At 7 cents per k.w.h. the pump would operate continuously.

A condition of this kind would indicate a "short." Remove the cover from the pressure switch and check results. With all lights, appliances and equipment "off," see if the meter disc revolves; if not start the pump and determine by watt hours per disc revolution (explained in December 1932 issue of ELECTRICITY ON THE FARM) if the motor is using too much energy. On rated load a ¼ h.p. motor uses energy at approximately 300 watts per hour: 1/3 h.p., 400 watts; ½ h.p., 500 watts.

Sometimes a slow flowing well causes a lot of trouble. The apparent water level may be within the 20' vertical suction limit of a shallow well pump but lowers below the suction limit as the pump operates. A well of this type requires a deep well pump.

Occasionally an over-zealous salesman sells a shallow well pump on a deep well job in order to underbid a more reputable competitor.

In regard to electricity as a cheap source of power, there were, on January, of this year, 691,753 farms of the U. S. equipped with high line electric service. I would estimate that on 60 per cent of these farms some kind of an electric water system was in operation and that 99 percent of the operators consider electricity the cheapest source of power they ever used for pumping water or for doing the numerous other farm jobs so ably and economically done by the electric motor.

Grain grinding equipment may be secured that range in power requirement from ½ h.p. to 5 h.p. that will grind grain on an energy consumption ranging between 4 and 30 k.w.h. per ton depending on the kind and fineness of the grain ground. Home grinding with electric power is proving very satisfactory and profitable.

Installation and Operating Cost of Hotbeds

Question: *Will you advise me as to the cost of installation and the cost of operation of a hot bed six feet by twelve feet?*

Do the wires have to be removed from the soil at the end of the season or can they be left in indefinitely?

M. C. B.

Answer: The cost of equipping a 6' by 12' hot bed would be approximately seven and one-half dollars for the heating element and eight to ten dollars for a thermostat control. The cost of operation naturally varies with the outside temperature and the temperature maintained in the hot bed. Reports from a number of users of electric hot beds indicate a range in energy consumption of ¾ to 2 kw.hr. per sash (3 by 6 ft.) for each 24 hours which on a 6' by 12' sash would result in an energy consumption ranging between 3 and 8 kw.hr. for each 24 hours.

There are different types of soil heating equip-

(*Continued on page 22*)

HOT WATER

For the kitchen.

For shaving.

Speedmaster ELECTRIC TEA KETTLE

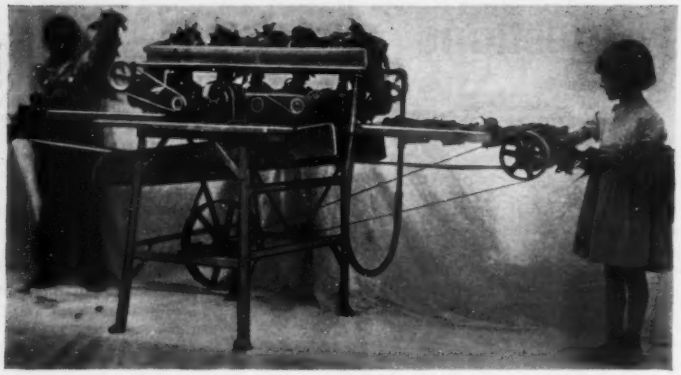
Hot water for many daily uses in every farm home. Hot water any time of the day or night—as handy as nearest range or wall outlet. Capacity 5 pints. Will boil 2 pints of water in less than 6 min. Economical to use—immersion type heating unit—whistles when water boils—no wasted current.

Making coffee.

See your power company or nearest electrical dealer. If they cannot supply you, write us direct. Price complete with heavy duty rubber cord $7.50, postage prepaid.

Baby's milk.

WEST BEND ALUMINUM CO.
Dept. 49, West Bend, Wisconsin



The Gavlak children operate the washing and polishing machine. Here they are shown washing and bunching beets.

WASHING VEGETABLES Solves a Problem

Electricity Does Work Formerly Done by Hand

ABOUT a year ago, Joseph G. Gavlak, a farmer located in Monongahela, Penna., met with an accident which resulted in his being unable to carry on the work about his truck farm for many months.

Experiments Prove Successful

Mr. Gavlak has for many years been interested in truck gardening and fruits, specializing in raising tomatoes. On his farm the system is to sort and polish the tomatoes before selling them, this work formerly being done by hand. During the period Mr. Gavlak was laid up, he was especially concerned about the greater burden placed on his children, who carried on the work while he was incapacitated. Knowing that hand sorting and polishing took a great deal of time, he undertook various experiments which resulted in his designing a machine that polishes from 25 to 40 bushels of tomatoes, and up to 60 bushels of apples an hour. This machine, which was completed last fall, washes and polishes tomatoes, apples, peaches, peppers, and cantaloupes. It will even wash eggs. In addition, it will wash bunch vegetables such as beets, carrots and radishes, the capacity being one bunch per second. The machine will also take sprouts off potatoes and wash them at the same time. With the aid of the machine, which is driven by a small electric motor, the children were able to carry on very effectively until Mr. Gavlak was again able to lend a hand.

Portable Motor for a Dime

(*Continued from page* 13)

the belt tight, the direction of rotaion should be such that the bottom of the belt is the tight side. If the top side of the belt is the pulling side, the motor may climb up the belt and tip over when starting a load. If the top of the belt must be the tight side, place the guide strips so the motor will be tipped at only a small angle to the horizontal.

This motor base is the simplest, cheapest, and most satisfactory arrangement we have been able to devise. It is not necessary to use any belt tightening wedges, slide the motor under any guide rails, or even go off the farm to get materials for constructing it. There are no bolts to be loosened when the motor is to be moved. Simply pick it up and walk away with it. When it is set in place in the next location it is ready to use.

AMAZING PRIME—CONTROLLED
ELECTRIC ONE WIRE FENCE
Big savings in fence costs. One electrified barb wire makes any field cow or hog-tight. Electricity only 10c per mo. This Prime Electric Fence Controller makes Electric Fence Sure and Safe. Just plug into any 110 a.c. or 32 d.c. light socket.
Delivers harmless sting but holds stock tight. Proved 4 years. Pays for itself on first field you fence.
FREE Write for Free Catalog and Trial Offer.
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PRIME
ELECTRIC FENCE CONTROLLER

Most Pump Per Dollar

EVERITE
Everite Pumps are more simply and strongly constructed. They are built to serve a definite pumping requirement—not to meet a price. Still they cost no more than ordinary pumps.
See your nearest Everite dealer or write direct to the factory and we'll furnish complete information without obligation.
EVERITE PUMP & MFG. COMPANY, Lancaster, Pa.

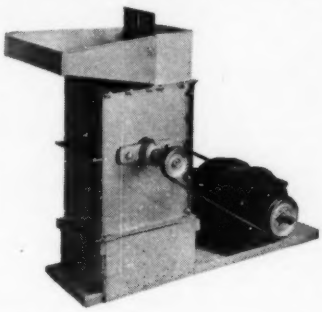
What's New

Reviewed by T. E. HIENTON

Names and addresses of manufacturers of the articles described in this column will gladly be furnished upon request. Address your requests to What's New Department, ELECTRICITY ON THE FARM, *24 West 40th Street, New York, N. Y.*

Feed Grinder

Grinding grains for various classes of livestock is in many cases a necessary practice to enable the animals to use them most economically. Grinders driven by 3 or 5-horsepower motors are in use on many farms throughout the country. Such installations are grinding more cheaply in many cases than can be obtained by any other method.



A hammer grinder, to be operated by 3 to 7-horsepower, is offered by a Kansas manufacturer of that type of grinder. This model is not a roughage mill but will grind small amounts of ear corn or hay according to the manufacturer. Eight rigid hammers, 12 inches in length, are mounted on a 11½-inch shaft and rotate in an 8-inch cylinder.

Electric Tea Kettle

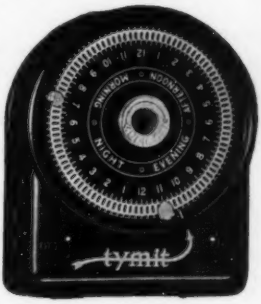
Small amounts of hot water are frequently needed in the farm household, for washing the separator, cleaning the churn or scalding a chicken. The electric tea kettle is a device which will interest many farm housewives because of its convenience for providing hot water for such tasks.

A new electric tea kettle, of recent announcement, has a working capacity of five pints. The electrical heating element, held in place inside the kettle, is of a replaceable ring type for 110 to

120 volt service and has a capacity of 1150 watts The heating unit, cover and handle are held in place by three screws. A cap on the spout is operated by a trigger on the bakelite handle for filling or pouring. A mild whistle, built into the cap on the spout, notifies the housewife when water has reached the boiling point.

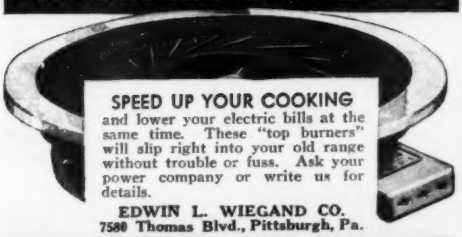
Electric Time Switch

Turning the lights on and off in the poultry house or turning on the radio to get weather or market reports at a definite time may be forgotten with the use of a new electric time switch. Many other appliances may be turned on and off with this device, such as water heaters in milk or poultry house, yard lighting for protection against thievery and refrigeration in the household. During the busy seasons on the farm such a time switch may prove to be a most watchful servant.



A new electric time switch, the product of a well-known manufacturer of clock controlled switches,

CHROMALOX
SUPER-SPEED ELECTRIC RANGE UNITS

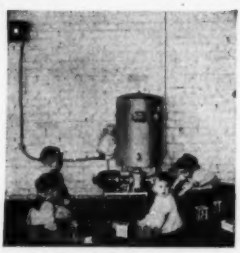


SPEED UP YOUR COOKING
and lower your electric bills at the same time. These "top burners" will slip right into your old range without trouble or fuss. Ask your power company or write us for details.

EDWIN L. WIEGAND CO.
7580 Thomas Blvd., Pittsburgh, Pa.

ASK YOUR POWER COMPANY for a FREE TRIAL

SAFE TO INSTALL
WHERE CHILDREN PLAY



A Burks Pump has no pulleys, gears or belts to endanger children. No valves, no pistons, only one moving part. Cannot knock, pound or hammer. Self Priming. Operates years without service. 14 years of Success. Get money saving facts from your Power Company, your Burks Pump dealer or us.

DECATUR PUMP CO., DECATUR, ILL.

Information Service!

● ***The various electrically-operated appliances in the list below have been proven practical for farm use by thousands of farmers.***

● ***Why not check over the list and determine which ones can be of greatest service to you? Full details about any application are yours for the asking.***

● ***Study the advertising pages—or use the handy FREE INFORMATION coupon below.***

FOR THE HOUSEHOLD

Ranges (*see advt., inside front cover*)—Refrigerators (*see advt., pages 4 and 15*)—Clothes Washers—Vacuum Cleaners—Ironing Machines—Dishwashers—Flat Irons—Food Preparing Machines—Ice Cream Freezers—Sewing Machines — Table Cooking Appliances — Clocks—Range Replacement Units (*see advt., inside front cover and page 21*)—Floor Polishers—Electric Tea Kettles (*see advt., page 19*).

FOR WATER SUPPLY

Automatic Water Systems (*see advt., pages 3, 15, 17 and 20*)—Water Heaters (*see advt., inside front cover and page 21*)—Controls—Septic Tanks.

FOR THE DAIRY

Milking Machines—Milk Coolers (*see advt., pages 4 and 15*)—Cream Separators—Churns—Bottle Washers—Dairy Sterilizers—Clipping and Grooming Machines.

FOR POULTRY

Incubators—Brooders—Time Switches—Drinking Fountain Warmers—Ultraviolet Light—Thermostats.

FOR REPAIR AND MAINTENANCE

Soldering Irons—Tool Grinders—Drills—Paint Sprayers—Woodworking Machinery—Motors.

MISCELLANEOUS

Feed Grinders—Ensilage Cutters—Corn Shellers—Hay Hoists — Feed Mixers — Stationary Spray Plants (*see advt., page 17*) — Burglar Alarms — Ventilators — Soil Heating Equipment—Insect Traps and Screens—Electric Fencing Units (*see advt., page 20*)—Radio Sets—Sheep Shearing—Light for Stimulating Plant Growth — Floodlights — Bunch Tyer — Vegetable Washer — Motors.

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— — — FREE INFORMATION COUPON — — —

Electricity on the Farm, 24 W. 40th St., New York

Without cost to me, please have manufacturers send complete information on the following Electrically Operated Equipment which I am thinking of buying.

....

....

My name is .....

Address .....

.....

I get electricity from .....

..... 6-35

has just been announced. This is made in two styles, one a plug-in type with 660-watt and the other an installed type of 1500-watt capacity. Both are equipped with 110-volt synchronous motors and are designed for use on 110-volt circuits only. Finish is in bakelite and chromium with black or walnut cases.

Questions and Answers

(*Continued on page 19*)

ment on the market. Some of the heating units, as lead covered cable, can be left in the ground indefinitely. With some of the other types it would be better practice to remove them from the soil after using and store until the next season.

Receiving Shock After Fuse Blows

Question: *Why, after a fuse has blown on a 110 volt circuit, is it possible to receive a shock on the circuit.*

P. R.

Answer: Many wiring installations that are rapidly becoming obsolete fuse both the ground and "hot" side of a 110 volt circuit. If the fuse on the ground side "blows" the circuit remains "hot" and the condition becomes dangerous. Under the modern wiring systems only the "hot" side is fused, and the ground remains continuous. Where both the ground and "hot" wires are fused, use the proper size fuse on the "hot" side and fuse the ground with a heavier fuse so there will be no danger of the ground fuse "blowing" first.

On 220 volt service, both wires are "hot" and both should be fused with the same size fuse. If one fuse blows, the circuit is "hot" and a short to ground would be 110 volts.

Question: *Could a starting motor for an auto (12 volt size) be successfully changed over so it would consume 3-4 amperes from a 12 volt battery?*

EARL DUFRESNE,
Shrewsbury, Mass.

Answer: A 12 volt auto starting motor would need no change in design to operate from a 12 volt battery. These motors, however, are very inefficient and the amount of power developed from one on an input of 3-4 amperes would be negligible. The entire method of application would be impractical and inefficient as the battery would have to be kept charged to operate the motors. In an auto the operation is more automatic and practical. The generator is charged when the engine is running and consequently there is abundant energy to charge the battery.

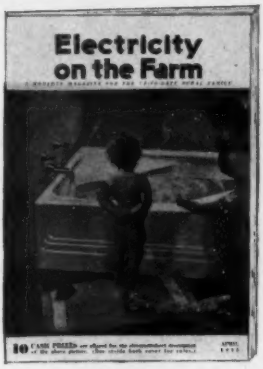
CLASSIFIED ADVERTISING

BROODERS—The unexcelled "Lyon Improved Electric." Other practical well proven types. ALARMS—Burglar, Fire, Temperature, Power-Off, etc. HEATING EQUIPMENT—for incubators, home made brooders. Water heaters. FLY and INSECT KILLERS—Send for complete electrical catalog and brooding data. LYON ELECTRIC CO., San Diego, Calif. (Pioneers of Electric Brooding).

IDEAL HAY HOIST operates Hay Carrier with 2 to 5 H.P. motor or engine. Saves extra team and driver all through busy haying season. 10 DAYS' FREE TRIAL. Write for circular 205. UNIVERSAL HOIST & MFG. CO..CEDAR FALLS, IOWA.

ELECTRIFIED FENCES REDUCE COSTS of farm fencing 80%. Controllers for 110 and 32 volt current. Uses short posts, no gates. Saves time, labor, material—as secure as concrete and steel. 30 days' trial. Write ONE-WIRE FENCE CO., B-11, Whitewater, Wis.

TITLE CONTEST AWARDS



APRIL COVER

RULES
JUNE TITLE CONTEST

Ten cash prizes will be awarded for the 10 best titles for the picture on the front cover of this magazine.

The first prize will be $20 cash, and nine second prizes of $2 in cash will be awarded.

In case of a tie, each winning contestant will receive the full cash prize to which he or she is entitled.

Titles should be brief — the shorter the better — and short slogans will be given preferences over rhymes.

All members of the farm family to whom this magazine was sent may submit titles, but each contestant may submit only one title.

Question "A" must be answered.

Entries must be sent to the Title Editor, ELECTRICITY ON THE FARM, 6 North Michigan Avenue, Chicago, Illinois, before July 1st.

Winning names and titles will be announced in the August issue.

Send your title on the coupon or make out a similar form on a plain sheet of paper or government postcard.

$20 First Prize for April Cover

"This Modern Miss will never know
The Saturday nights of long ago."

MRS. RALPH WOLFE,
R.F.D. 2, Schuyler, Neb.

Nine $2.00 Prizes for April

"Bathing time has magic charm,
When there's electricity on the farm."

MARY JANE McEWEN, New Bethlehem, Pa.

"Running water, laughing eyes,
Makes our home a paradise."

MISS IRENE LANG, R. No. 2, Manson, Ia.

"Bath time is play time on an electrified farm."

MRS. C. M. BURKHOLDER, R.F.D. 2, Lyndon, Kans.

"A bath for the farm kiddies electrically run.
Gee! how easy, and Oh! what fun."

MRS. J. QUINCY WARD, R.F.D. 1, Cynthiana, Ky.

"Modern magic fills the tub,
And makes it warm for baby's rub."

MRS. C. H. POLHEMUS, Ulster Park, N. Y.

"To wash or not to wash, that is 'no longer' the question."

MR. PAUL W. LONGSDORF, Rushland, Pa.

"Some wash 'em hot,
Some wash 'em cold,
But you need running water
For a two-year-old."

C. NOTTINGHAM, R. 5-D, View Ave., Ocean View, Va.

"Even a baby will stop its play
To take a bath the electric way."

BILLY A. GUILFORD, R.F.D. 3, Keytesville, Mo.

"Now the water is up to my chin;
It never was—when they carried it in."

MISS ALTHEA DE LAMATER, R.F.D. 1, North Adams, Mich.

---My title for the Front Cover picture on ELECTRICITY ON THE FARM for June is---

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(a) What is name and address of dealer to whom you would go if purchasing a new reading or study lamp?

.....

.....

My name is..... R.F.D.....

Post Office..... County..... State..... 6-35

ELECTRICITY ON THE FARM
24 West [redacted]th Street
New York, N. Y.

Return Postage Guaranteed

"Um, Boy, that looks good!"

An ELECTRIC RANGE *is sure to please!*

● People who know good food (which includes those who do the cooking and baking, and those who test the results) are constantly praising the modern electric range. Electric cooking pleases the cook, because it makes her work easier and makes it certain that her dishes will always be at their best. And the members of the family and guests, who judge cooking by the way it tastes, find finer flavor, more nourishment and no disappointments with electric cooking. Ask your dealer, or our Rural Service Department, to tell you more about the advantages of cooking electrically.

NORTHERN INDIANA PUBLIC SERVICE COMPANY

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